

OBSERVATIONS

ON

MEDICAL ELECTRICITY,

CONTAINING

A SYNOPSIS of all the Diseases in which Electricity
has been recommended or applied with Success;

LIKEWISE,

Pointing out a new and more efficacious Method
of applying this Remedy,

BY

ELECTRIC VIBRATIONS.

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SUAVITER IN MODO----FORTITER IN RE.

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ADVERTISEMENT.

ELECTRICITY has long been considered as an effectual remedy in a variety of Disorders; but the want of a proper guide, to point out those cases for which it is peculiarly adapted, has hitherto prevented mankind from reaping the manifold advantages that might be derived from this important branch of Science.

Although the practice of Medical Electricity has received some of its most important improvements in this country, no publication has hitherto appeared in the English language containing a comprehensive view of the various observations scattered in writers both foreign and domestic relative to this subject.—The following pages are designed to supply this defect, and to exhibit a SYNOPSIS of all
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the complaints in which advantage has been derived from the administration of the Electric Fluid; without attempting to theorise respecting its mode of action, or deduce imaginary hypotheses from premises not well ascertained.

A volume might have been filled with the cases which have come under the Author's notice since he began the practice of Medical Electricity; the few inserted here have either been accompanied with some singular circumstances, or tend to prove the advantage of this remedy in cases where its utility has not been determined.

No. 42, St. Paul's Church-Yard,

March 20, 1787.

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INTRODUCTION.

ELECTRIC matter being a principle so universally diffused throughout the universe, by which many of the most wonderful phenomena of nature are produced, remarkable effects must undoubtedly result from its application to the human body, both in a state of health and of disease. Accordingly we find, that very soon after the principles of Electricity were generally known, its powers in the cure of diseases were made trial of with success. Like all other important discoveries, it was in its infant state clouded by obscurity, and disgraced with fiction. The falsehoods propagated all over Europe relative to the effects of medicated globes and tubes, by men of science and established reputation, which were disproved by numberless experiments, and afterwards recanted even by their authors, are a disgrace

to philosophy. Since that time, the knowledge of Medical Electricity has been gradually improved on the sure basis of experiment and observation. If the enthusiasm of some individuals in pursuit of a favourite subject has carried them too far, advantage may even be derived from their errors. They have determined those cases in which Electricity is injurious, as well as pointed out a greater variety of diseases in which its application is attended with success.

That prepossession in favour of Electricity as a certain remedy for every disease incident to the human body, which prevailed a few years ago, seems to have generally subsided, and there now appears to be some danger of its sharing the fate of many other useful remedies, which, because they could not cure all diseases, have been capriciously discarded as totally inefficacious. The present, therefore, appears to be a favourable period for settling the due degree of regard that Electricity merits in the general practice of Physick; which shall be attempted in the following pages, from an accurate consideration of what the most authentic writers have offered on this subject, as well as from the result of extensive practical experience.

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Were the mode in which the electric fluid acts when applied to the human body understood, it would lead us in some measure to the knowledge of those diseases in which it might be applied with advantage. But the immediate action of medicine is not easily explained. If the specific action of a remedy which is employed for the cure of a small number, or even of one disease, still remains unknown, it can hardly be supposed that the operation of Electricity, which is useful in such a variety of dissimilar complaints, should be clearly understood. Its mode of action must be determined from its general effects.—Simple electrization, or keeping the body in an atmosphere of electric fluid, encreases the force of the circulation, augments the secretions in general, and has a wonderful power in enlivening the animal spirits. When applied to any particular gland, it encreases its peculiar secretion; and is singularly efficacious in exciting the action of the absorbing system. Hence Electricity may be considered as a powerful general stimulant, removing obstructions, and constantly useful in all complaints arising from a want of due energy in the living powers of the animal body.

It is a stimulant, however, of a peculiar nature. The remedies commonly employed with this view, act only in a secondary manner on the disease which they are intended to remove. The effects of cordials taken into the stomach, seldom probably go beyond the first passages. Vesicatories, wherever they are applied, although a painful remedy, produce their effects only in a secondary manner on the disease for which they are used. But Electricity penetrates every part of the human frame, and acts immediately and powerfully on the most deep-seated diseases. This is clearly proved by its often exciting the motion of the heart in cases of suspended animation, after every other stimulus had been tried in vain. A degree of sinking and languor, proportioned to the previous excitement, never fails to succeed the use of every stimulating remedy taken into the stomach. Electricity is entirely free from these pernicious effects. It can be applied to any particular diseased part, independant of the rest of the body, and when diffused through the system in general, it permanently enlivens the spirits, and increases the vital functions, without ever being succeeded by dejection.

The modern practice of Electricity rejects those violent modes, such as strong shocks, &c. which
accom-

accompanied its first introduction into medicine.—

All the good effects that it is capable of producing, are now found to result from more gentle applications; such as the stream from metal, or wooden points, frictions, drawing sparks through flannel, and especially from the use of what I call *Electric Vibrations* *, which in a variety of cases have been employed with the happiest success. To these mild, and even pleasing operations, the most timid or nervous of either sex need not fear to submit.— That Electricity, properly administered, is of use in a greater variety of diseases than any other single article in the whole *materia medica*, will, I think, evidently appear, from an impartial consideration of the following pages.

* This gentle mode of applying the Electric Fluid in the cure of Diseases, so far as I know, originated with myself, and is, I believe, only employed in my own practice.

OBSERVATIONS
ON
MEDICAL ELECTRICITY.

EVERY disease in which Electricity has been recommended or applied with success, may be comprehended under some one of the following *genera*:

FEVER.

NERVOUS DISORDERS.

SPASMODIC AFFECTIONS.

INFLAMMATIONS.

LOCAL DISEASES.

OBSTRUCTIONS.

In treating a subject of this kind, consisting of a variety of particulars, it becomes necessary to pursue some plan.—Although that which is here adopted may not be altogether conformable to the scientific classification of diseases, yet being an attempt at arrangement, it will tend to prevent that confusion which would inevitably obscure a collection of desultory observations.

S E C T. I.

INTERMITTENT FEVER, OR AGUE.

Rarely, says M. CAVALLO, has Electricity failed to cure this Disease. One or two electrizations have frequently been sufficient to remove it entirely. SYMES, in his *Dissertation on Fire*, relates several cases of Tertians cured by Electricity. Successful cases are likewise recorded in the *Philosophical Transactions*, vol. xlvii.—Indeed, considering the ease and certainty with which Electricity commonly removes this complaint, and the frequently tedious operations of internal remedies, it is surprising that this method

method of cure is not more commonly used in private practice—but long established prejudices are not easily eradicated.

S E C T. II.

NERVOUS DISORDERS.

This general appellation has been given to a class of diseases, which physicians have not well known how to explain. They were little known to our ancestors, and rarely occurred even in the last generation. The increase of luxury, and a more effeminate mode of living, have now rendered them very common. It is needless here to describe the languor, relaxation, and depression of spirits, which are too well known to accompany these complaints.—A variety of cases have occurred to me, where simple electrization has removed those anomalous symptoms. Throwing the stream round the head, and directing *vibrations* along the spine, have often a wonderful effect in removing depression of spirits. This treatment applied to the origin of the nerves, appears to rouse and invigorate the whole system.—

When the disease has made farther progress, the symptoms become more defined, and others occur, which I shall proceed to notice.

NERVOUS HEADACH.

I am acquainted with no writer who has particularly mentioned this complaint, except M. CAVALLLO, who observes, that Nervous Headachs, even of a long standing, have been generally cured by gentle electrization, the irritable habits in which this complaint commonly occurs being incapable of bearing a violent treatment.

Mrs. F——* had been long severely afflicted with this complaint:—A variety of medicines having been tried in vain, her physician, the late Dr. KNOWLES, advised, as a *dernier ressort*, the application of a large blistering plaster to the head. The patient being unwilling to submit to so severe a remedy, the Doctor

* All the Cases inserted here may be depended on as authentic. The names of the patients are not inserted at length, having observed many disagreeable consequences to result from doing this in a collection of cases which I formerly published. Any person wishing for more particular information, shall, on applying to me, be referred to the parties themselves, whose cases are here mentioned.

advised Electricity, as the only alternative, which fortunately operated a complete cure.

Mr. A—— laboured under the same complaint, accompanied with giddiness, stupor and loss of hearing.—In this case the use of Electricity was attended with equally salutary effects.

HYSTERIC COMPLAINTS,

Partaking so much of the nature of Nervous Disorders, we might almost conclude, *a priori*, that a remedy which is useful in the one would likewise be successful in the other. But as these are commonly supposed to occur only in one sex, and to arise from a peculiar cause, afterwards to be noticed, their more particular consideration shall be at present postponed.

I shall here, however, notice a remarkable case of this kind, which lately came under my inspection.—Miss C—— had during several years been liable to violent hysterical paroxysms, which were not alleviated by any medicines she had made use of.—She was particularly distressed by a violent pain dart-

ing through the lower part of the thorax, which appeared to me to be a spasmodic affection of the diaphragm. All her complaints were removed in a short time by the application of Electricity, which she has had recourse to at intervals ever since, with a view to prevent a relapse. This lady was at one period seized with an intermittent fever, which was completely removed by Electricity, without the assistance of any other remedy.

P A L S Y.

This disease more particularly merits the name of nervous than those mentioned above. All our present knowledge concerning it tends to prove, that it is constantly owing to some immediate læsion of the nervous system.—M. JALLABERT, professor of philosophy at Geneva, was the first who successfully applied Electricity to the cure of Palsy. To him, therefore, the public are indebted for the discovery of a remedy for this fatal complaint, which is becoming every day more common. A variety of authors have mentioned the advantages derived from the use of Electricity in this disease. No one appears to have applied it with more universal success in Palsy than M. MAUDUYT of Paris, to whose ingenious

nious Treatise * on Medical Electricity I confess myself indebted for much useful information.—Instances of its success in Paralytic complaints are recorded in DIEMBROCKII, *Observat. Curat. Medic.* WARDROPE, *Dissertatio de Paralyfi*; HALL, *Dissert. de Electricitate*; *Philosoph. Trans.* vol. i. part ii; *Ibid.* vol. i. p. 392; DE HAEN, vol. i. p. 228; observes, *Indiscriminatim emendari ex quacunque demum origine Paralyfin*: See also PRIESTLY, *Recueil sur l'Electricité medical*; DUNCAN'S *Medical Cases*; &c.

The application of Electricity appears likewise much to assist the operation of blistering plaisters, which are commonly applied in this disease, by producing a very copious discharge of *serum*.

HÆMIPLEGIA.

This complaint partaking so much of the nature of the disease just mentioned, it does not admit of a doubt that Electricity must likewise be useful in its

* *Mémoire sur les différentes Manieres d'administrer l'Electricité, et Observations sur les Effets que ces divers moyens ont produits*; par M. MAUPUYT, a Paris, 1784.

cure. Dr. BOHADTCH, in a treatise on Medical Electricity, points out Hæmiplegia as a complaint in which it is of more use than any other. All the authorities might be cited to prove its utility in this disease, which were quoted in the preceding paragraph; to which may be added the favourable testimony of the celebrated M. SAUVAGE*.

Electricity may also be useful as a prophylactic, in a tendency to paralytic disorders. I have at present several patients under my care, who from some symptoms which threatened the approach of paralysis were induced to make trial of Electricity as a preventive; in consequence of which they have continued for several years free from any attack of that disorder.

* I have been employed in so many instances of this disease, by the most eminent of the faculty, that it would be endless to attempt the insertion of the cases of Hæmiplegia in which I have applied Electricity with success. I can refer any one who wishes for more particular information, to a variety of living testimonies of its efficacy in this complaint.

S E C T. III.

SPASMODIC AFFECTIONS.

The first account of the application of Electricity to medical purposes was in a complaint of this kind. M. KRATZENSTEIN, professor of medicine at Hall, cured a person of two contracted fingers by once electrifying them. Since that period its use has been extended to a variety of similar disorders.

T E T A N U S.

The most remarkable instance of the good effects of Electricity in this complaint, is related in the case of a young girl in the Foundling Hospital, whose whole body continued during a month so cold and rigid, as rather to resemble a dead than a living animal. After every other remedy had failed, Dr. WATSON effected a complete cure by means of Electricity; *Phil. Trans.* vol. liii. p. 10. The few examples on record of the effects of Electricity in the cure of Tetanus, are principally to be attributed

buted to the rare occurrence of that complaint in these regions.

TRISMUS.

The Locked Jaw may be considered as a species of Tetanus. Mr. S——, in whom this complaint had been induced by a carious tooth, after having used a variety of medicines without effect, applied to me, and was perfectly cured in a short time.

A similar case is related by Mr. SPRY; *Philos. Transf.* vol. lvii.

ST. VITUS'S DANCE.

The cure of a very obstinate case of this kind, by Electricity, where even memory and the other intellectual faculties were much impaired, is related by Dr. A. FOTHERGILL; *Phil. Transf.* vol. lxix.

DE HAEN affirms, that a frequent repetition of slight shocks hardly ever failed to cure this disease under his management; *Ratio medendi*, vol. i.

TREMORS.

Partial tremors, of particular limbs, and certain muscles, which, though less violent, bear a strong affinity to the complaint just described, are almost constantly removed by electrization.

WRY NECK.

A very bad case of wry neck completely removed by electricity, is related in the *Philos. Trans.* vol. lxxviii. There can be no doubt but that other contracted muscles may be cured by the same means.— I lately removed a contraction of the mastoid muscle, which had continued several years, in Master G——, a fine boy of eight years of age.

A remarkable case, illustrating the power of electricity to remove obstinate contractions, was related to me by Mr. CHURCH, surgeon, of Islington, as having occurred in his own practice. Mr. G. S. had the extensor tendons of his right hand divided by the stroke of a cutlass. The hand was bent back to favour the union of the divided parts, which, after the cure was completed, retained this situation.—

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A variety of means having been tried to remove the contraction without success, Electricity was had recourse to, which in a short time restored the perfect use of the wounded hand.

EPILEPSY.

Although Electricity has not hitherto been applied to the cure of this disease in England, yet in other countries its good effects have been highly extolled. M. DESHAIES, in a Theses published at Montpellier in 1749, relates two cases of Epilepsy, combined with Hæmiplegia, which were gradually relieved, and at last completely cured, by means of Electric baths and gentle sparks.

A royal hospital has lately been established at Paris for the particular reception of Epileptics, to be treated by Electricity alone. The application of this remedy is conducted by M. LE DRU, whose success in private practice has been sufficient to attract the royal patronage. The treatment is conducted under the inspection of certain gentlemen of the Faculty, who have published a Memoire containing a favourable representation of its effects, and they have promised soon to give the world a more complete account of the

the application and utility of Electricity in the cure of this disease. Very strong shocks are, however, said to be administered.

M. MAUDUYT has also made trial of Electricity in several cases of Epilepsy, from which he concludes, that when Epilepsy is symptomatic; as it frequently is, of obstructions, &c. it is commonly removed by the judicious application of Electricity; but when idiopathic, or constitutional, little advantage is to be expected from the use of this remedy.

S E C T. IV:

INFLAMMATIONS.

Electricity has been employed with success in a variety of inflammatory complaints. From its gently stimulating and tonic powers, it appears well calculated to discuss slight inflammations. Those diseases shall here be mentioned in which its good effects have been established by manifold experience.

G O U T.

A gentle stream of electric matter, directed by a wooden point upon the part affected, has frequently relieved the excruciating pain of the Gout. Much caution, however, is required in conducting this operation, as there is danger of repelling the morbid matter, and affecting some of the more vital parts. M. CAVALLO and M. ZETZELL* have particularly recommended the use of Electricity in this complaint. The testimony of BECKET, SYMES, and LOVET, whose works have been already mentioned, may also be adduced.

More advantage, however, is to be expected from the application of Electricity in cases of retrocedent or wandering Gout. By exciting a partial inflammation in any of the extremities, it may tend to fix the disease in that part, and relieve the more important organs from the danger of an attack. In several instances of this kind, I have succeeded in my endeavours to produce a regular fit of the Gout.

* *Vide* his Theses published at Upsal in 1753.

S C I A T I C A.

This painful disease, termed the Hip-gout, has been very generally removed by the use of Electricity. M. MAUDUYT, whose candid and judicious observations on every part of this subject merit the utmost attention, relates several cases of Sciatica which he had removed by the application of Electricity. In the publications of WESLEY and LOVET a variety of instances of this complaint being removed by the same means are related.

R H E U M A T I S M.

For this disease Electricity has been always esteemed an useful remedy. In recent cases it hardly ever fails, and even in those of long standing it is frequently successful. Authorities need not be adduced to prove the utility of Electricity in this complaint, as it has been recommended by every author who has treated on the subject, and my own experience confirms the truth of their opinion.

A case in which the speedy effects of this method of cure were very remarkable, lately came under my notice,

notice. Mrs. B——, whose wrists and ankles were so inflamed and swelled as to be totally incapable of motion, had their use perfectly restored by a single operation. Electricity was continued some time by way of prevention, but she never experienced any relapse.

INFLAMMATION OF THE THROAT.

A remarkable case of the utility of Electricity in this disease, is that of the celebrated Mr. FERGUSON, as related by himself. From a state of considerable pain, and total inability to swallow, by drawing sparks from his throat, he was in the course of a few hours restored almost to perfect health.—

A similar instance is related by LOVER.—In this complaint Electricity appears to answer every purpose of vesicatories, which it is the general practice to apply, while the pain and unseemly scars attending their use are totally avoided.

OPHTHALMIA.

The salutary effects of Electricity are more remarkably obvious in inflammations of the eyes, than perhaps in any other disease to which it is applied.—

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An eye suffused with blood, and closed up by inflammation, is frequently in a short time restored to a state of perfect soundness, and the sensation produced by the *aura* is so agreeable, that the patient commonly requires a continuance of the operation.— M. CAVALLO records a case of a very obstinate Ophthalmia cured by electrization. Many instances have occurred in my own practice, some of which appeared to proceed from a gouty disposition, in which the proper application of Electricity has operated a complete cure.

CHILBLAINS.

In this country Chilblains prove often a very troublesome, and sometimes even a painful complaint. I have applied Electricity in various instances of this affection, and never knew it fail to give great relief, or remove it entirely in a very short time.

SECT.

S E C T. V.

L O C A L D I S E A S E S.

This section will comprehend a variety of diseases where Electricity has been found serviceable, and which cannot be referred with propriety to any of the other heads into which this treatise is divided.

T O O T H A C H.

When this disease proceeds from cold, or what is commonly called a rheumatism of the face, it is generally removed by applying the electric *aura* to the part affected. But the pain arising from a carious tooth is often exasperated to an intolerable degree by the gentlest electrization.—Electricity is strenuously recommended for the cure of this complaint in LOVET's Essay; and the ingenious Mr. FERGUSON was so fully convinced of its good effects, that he constructed an instrument purposely for directing the shock through any particular tooth. A shock may indeed be conceived sometimes to remove
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the pain of the toothach, in like manner as burning the ear, or any other sudden and violent surprise.

GUTTA SERENA.

That this disease, which has so long baffled all the powers of medicine, has frequently been cured by the proper application of the electric fluid, is proved by the testimony of many respectable writers. Mr. WILKINSON observes, *Electricitas hoc in morbo optime cessit*. M. CAVALLO's Essay, page 54; DE HAEN, *Ratio Medendi*, vol. i. p. 239; *London Med. Observat.* vol. v. p. i—31; *Medical Commentaries*, vol. iii. p. 404; *Recueil sur l'Electricité Medicale*, vol. i. p. 178; BECKET's *Electricity*, p. 70. and SYMES on *Fire*; may all be referred to as containing favorable representations of the effects of Electricity in this complaint. A case of this disease lately occurred in my own practice, in which the application of Electricity performed a complete cure. Mr. B——, who had been totally deprived of sight during nine months, by what the Faculty in general considered to be a *Gutta Serena*, was advised to make trial of Electricity. The Electric fluid was applied in various modes, particularly by *Electric Vibrations* directed through the head. At the end of six weeks he was enabled to

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read large print; at this period business obliged him to leave town, after which he gradually recovered without the assistance of any other remedy.

OPACITY OF THE AQUEOUS HUMOR.

The only case of this kind in which I ever heard of Electricity being tried is related by M. CAVALLLO, and in that instance it proved successful.

CATARACT.

From the general effects of Electricity in increasing the action of the absorbents, its utility in this complaint might reasonably be inferred.—A case in which Electrization cured blindness, arising from cataracts formed in both eyes, is related by Dr. KNOX, in the 9th volume of the *Edinburgh Medical Commentaries*. A similar case, cured by Electrization, is published in the *Medical Journal*, vol. vii. Several instances of defective vision, apparently caused by incipient Cataract, have occurred to me, which were always removed by Electrization.

HOARSENESS.

HOARSENESS.

I have had occasion to see several obstinate cases of this complaint removed by Electrization; similar instances are likewise related in HOME's *Clinical Experiments*.

SPRAINS AND BRUISES.

In these accidents Electricity appears to restore the tone of the weakened and distracted fibres, as well as to dissipate the swelling by promoting the absorption of the fluids which are effused into the cellular membrane. I have frequently succeeded in removing the weakness that remains in a joint which has been sprained. One case in particular I recollect. Mr. B—— of Manchester had sprained his right knee, which continued feeble and painful during eighteen months, after trying various applications, he had recourse to Electricity, which in a short time restored the part to its wonted strength and vigor.

DEAFNESS,

Except when it is occasioned by some malconformation of the organ of hearing, seldom fails to be removed by the proper application of Electricity. Passing the *Electric Vibrations* through the head has excellent effects in the cure of this complaint. A more copious secretion of wax soon follows the use of Electricity, and is generally the forerunner of a complete cure.

ULCERS,

In ill-conditioned ulcers of long standing; the application of the electric stream tends to abate the inflammation, and soon produces a discharge of laudable pus, which gradually lessens, in proportion as the limits of the sore contract, till the cure is completed. The mild stimulation of the electric *aura* is certainly much less painful, and equally efficacious as the violent irritation of metallic salts, commonly used with the same intention. M. CAVALLO observes, that "open sores of every kind are disposed to heal "by electrization."

LUMBAR

LUMBAR ABSCESS.

Electricity has been known in various instances to disperse incipient collections of matter M. CAVALLLO mentions a case of Lumbar Abscess which was perfectly cured by means of Electricity. Much attention, however, is requisite to conduct its application in such cases with propriety. Shocks, instead of dispersing, have been found to accelerate the formation of matter.—Electricity may on similar principles be used with advantage at an early period of that lameness, caused by the formation of matter at the articulation of the thigh-bone, commonly termed the *hip-case*.

T E N I A.

There is an instance of the Tape-Worm being removed by the use of electric shocks, mentioned in Dr. WILKINSON'S *Theses de Electricitate*; and I have lately heard of another case of its success in this disease. In a publication such as this, intended to point out every disease in which Electricity may be tried with any probability of success, it would be improper to omit a single case in which advantage had
been

been derived from its use, and where a further trial of it may be plausibly recommended. This animal being possessed of much weaker powers of life than the body in which it resides, a moderate shock may easily be conceived to destroy it, without injuring the person through whom it is transmitted. The powers by which the Tape-Worm adheres to the intestines being annihilated with its life, it will consequently be discharged. If farther experience ascertains Electricity to be an effectual remedy for the Tape-Worm, which frequently resists the most powerful medicines, it may certainly be considered as a general blessing to mankind.

GLEETS,

Electricity has often been successfully employed to remove the relaxation which causes this complaint. It is recommended with this intention by Mr. J. HUNTER, in his late celebrated work on the Venereal Disease.

CUTANEOUS ERUPTIONS,

I have seen many instances of these disagreeable complaints, especially such as occur on the face, being

ing removed by the application of the electric stream. At first, it often causes them to spread more, and excites a grateful warmth around the part to which it is applied; this, however, is a favourable symptom, and commonly the forerunner of a cure. M. CAVELLO mentions its utility in these complaints.

S E C T. VI.

O B S T R U C T I O N S.

From the general effects of Electricity in increasing every action performed by the living powers of the human body, its good effects in all diseases that can be attributed to obstruction, may certainly be inferred.

A M E N O R R H Œ A.

The salutary effects produced by Electricity in cases of obstruction peculiar to the female sex, have been so long established by the most ample testimony;

ny *; it may be safely asserted, that if medicine can boast of any specific whatever, Electricity may be considered as such in these complaints. Much, however, depends on its proper application. *Electric Vibrations*, from their peculiar action on the internal parts of the body, appear to be well calculated for the removal of this disease. Of the great variety of instances of this complaint, some of which were attended with the most untoward symptoms, that have been under my care, I do not recollect ever to have failed of producing a cure. The number, as well as the peculiar circumstances attending these cases, forbid their insertion.

I may here be permitted to coincide with the humane wish of M. MAUDUYT †, “ That some public establishment were formed, where the lower classes of women might be electrified *gratis*, with proper care and decency, who, from their exposure to the vicissitudes of the seasons, and their laborious employments, are peculiarly liable to obstructions which frequently lay the foundation of the most dangerous and incurable diseases.”

* See Birche's Treatise on this subject, *Mauduyt, Cavallo, &c. &c.*

† *Memoire sur, &c.* p. 97.

OBSTRUCTION OF URINE.

Electricity has often been employed with success to remove this complaint. A singular case of this kind occurred some time ago in the Royal Hospital at *Edinburgh*. A person, in consequence of some injury received on the abdomen, was seized with stranguary, and never passed any urine during six weeks, except when under the operation of Electricity, by means of which the disease was finally cured.

C O S T I V E N E S S .

Electricity appears to promote the secretions of the intestines, as indeed it does all those of the living body. I have in several instances removed a costive habit by this means. The electrical operations required to produce this effect are so gentle, that it has been employed with success to keep the body open during the whole time of pregnancy, in a case where no other aperient remedy could be made use of least abortion should be produced.

J A U N D I C E.

Where this disease proceeds from a spasmodic stricture of the gall-duct, which frequently takes place, Electricity may certainly be used with advantage.—A young gentleman, who had laboured several months under this complaint, was desired by his physician to make trial of Electricity. He applied to me—The *Electric Vibrations*, passed through the region of the liver, soon removed the obstruction, and produced a complete cure.

FISTULA LACHRYMALIS.

M. CAVALLO asserts, that all the cases of Fistula Lachrymalis, in which Electricity has been administered during a sufficient time by a person of abilities, have been cured by it. LOVET has also recorded its utility in this disease. No case of Fistula Lachrymalis has ever come under my notice; but, from the well known efficacy of Electricity in removing every species of obstruction, I have no doubt of its being equally successful in this complaint.

DYSPPHA-

D Y S P H A G I A.

A case of difficult deglutition, not arising from any apparent mal-conformation of the parts, is related in Dr. DUNCAN'S *Medical Observations*, which was removed by the application of electric sparks, after the patient had laboured under it for some years, and used a variety of medicines without receiving any advantage. This disease frequently occurs, and often terminates fatally; Electricity having operated a complete cure, though but in one instance, should induce a more extensive trial of its effects in similar complaints.

D R O P S Y.

Instances of the success of Electricity in removing this disease, at an early period, are not wanting.— Dropsy, in all probability, frequently arises from a want of action in the absorbent vessels, which prevents them from taking up a due portion of the secreted fluids. The powers of Electricity in promoting the action of the absorbents, which have been repeatedly noticed, point out its utility in the various species of this complaint, as *hydrocele*, *anasarca*, &c.

I lately employed Electricity in a case of *Hydrocephalus*, or dropfy of the brain, where the head was very much enlarged, and which had proceeded so far as entirely to deprive the child of sight.—Whether the cure was produced by Electrization I am unable to determine, as the patient took mercury at the same time; but certainly from the joint operation of these remedies, the disease disappeared. Mr. J. HUNTER has indeed observed, that mercury, by increasing the irritability of the system, favours the action of Electricity, and even in some cases, where Electricity alone produced no effects, he has succeeded by putting the patient under a course of mercury.

TUMORS.

Electricity has been found useful in a variety of diseases that come under this denomination.—Dr. DUNCAN of *Edinburgh* recommends its application in scrophulous and cancerous swellings.—Dr. PERCIVAL, in the *Medical Commentaries*, vol. vii. observes, that Electricity would be an excellent auxiliary to other remedies in removing strumous or white swellings of the joints. I have, says the Doctor, seen admirable effects from its use in various glandular

glandular tumors, nor do we know any more powerful means of removing obstructions, or promoting the absorption of stagnant juices.—I lately, by this means, removed a number of hard tumors from the neck of Mr. M—, where they had remained during three years, and resisted a variety of applications.

Under this head I may comprehend a case of *bronchocele*, or what is commonly called the *Derbyshire Neck*, which had attained a considerable size, and was removed by a regular course of Electricity, continued during three months.

Induration of the prostate gland may also be mentioned in this place. This is a very common consequence of venereal complaints, and frequently causes obstruction of Urine. A proper application of Electricity has often been found to diminish, and even remove it.

So powerful, indeed, is the application of the Electric Fluid in promoting the action of the absorbents, that it has even been known to cause the absorption of exuberant callous after fracture, and restore a deformed limb to its natural state.

C A N C E R.

M. CAVALLO mentions a case where the excruciating pains of a Cancer were mitigated by the electric *aura*, and, in consequence of this application, the fore even assumed a healing appearance. The termination of the case, however, is not mentioned.

If Electricity is found to lessen the pain, and promote the cure of a Cancer, when an open sore, as well as to accelerate its discussion when in a state of induration, it must certainly be considered as a remedy possessing salutary effects in some of the most deplorable diseases incident to human nature.

/ A very

A very singular Case occurred to me when this Sheet was going to Press, which illustrates the Powers of ELECTRICITY in removing SPASMS in so pointed a Manner, that I shall insert it here, although out of its proper place.

A Physician * in the city brought a young Gentleman to my house in his chariot, whose jaw was so firmly *locked*, that no force which could be applied was capable of opening it. I placed him on the insulated chair, and no sooner began to pass the *Electric Vibrations* along the Temporal Muscle, than the jaw, by synchronous convulsive motions, testified that a relaxation was beginning to take place in the contracted muscular fibres. This motion gradually increased, and, in the course of ten minutes, the complete use of the jaw was restored, to the great satisfaction of the patient, and, I may add, the astonishment of the physician, and of several other persons who were accidentally present.

* Dr. DE VALLENGINE.

CONCLUSION.

THE Review I have just taken of this subject, and the respectable authorities quoted, with the intention of establishing the utility of Electricity in a variety of Diseases, are sufficient to convince any candid and unprejudiced mind, that it may certainly be considered as an agent of considerable use in the practice of medicine. Allowing its effects only to equal those of other remedies already known, it is still augmenting the *Materia Medica*, and increasing the resources we are possessed of to remove disease; and in some particular *idiosyncrasy*, or peculiarity of constitution, it may perhaps succeed where other modes of cure have failed.

The reputation of this excellent remedy has been much injured by the inexperience and unskilfulness of many who have attempted to administer it, in the cure of diseases. Every person possessed of a paltry electrical machine, and capable of charging a Leyden phial, has presumed to let loose this powerful element,

element, the efficient cause of the most tremendous phenomena in nature, on the irritable frame and debilitated nerves of an invalid. No wonder if mischief has resulted from such conduct. A powerful and well-constructed apparatus, long and attentive experience, are requisite to employ this active agent with propriety. The former of these I certainly possess. A constant and assiduous attention paid to this branch of medicine for a period of nearly ten years, during which I have applied Electricity to a multitude of diseases with various success, gives me some claim to the latter.

Electricity has also suffered from the ill-founded expectations of those who have employed it as a remedy. It has been supposed rather to act like a charm than a medicine. If instantaneous relief did not result from the first operation, it was rejected as useless. But Electricity, like every other means of cure made use of in the practice of physic, requires some time to produce its salutary effects, and many obstinate diseases, in which it is considered as inefficacious, might unquestionably be removed, by persevering for a longer period in its application.

In many species of *Paralysis* Electricity may certainly be considered as the most effectual remedy that can be employed. Were it had recourse to at an early period of the disease, during that time which is often wasted in drinking some mineral water, or swallowing an insignificant drug, much might be expected from its use.—But when it is only repaired to as a kind of desperate expedient, after the constitution is debilitated by having undergone the whole round of stimulating medicines, and time has increased the inveteracy of the disease, how can Electricity be expected to succeed?

Such conduct, indeed, is too common in every case where this remedy is made use of. It is seldom mentioned till the patience either of the patient or the Doctor, or perhaps of both, is exhausted, when Electricity is recommended and employed, rather with a view to get decently rid of each other, than from any well-founded hopes of obtaining a cure.—This being the case, it is rather to be wondered at that it ever succeeds, than that it sometimes fails.

Would the Faculty in general lay aside prejudice, and candidly recommend it in cases where its use is plainly indicated—would mankind consult their own
welfare,

welfare, and employ this remedy at a period when a cure was yet practicable—Electricity would soon lay aside its present character of a quackish and uncertain remedy, and acquire that solid reputation as an useful article of the *Materia Medica*, which it certainly merits.

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